A.Kubelik

1638

```
        RAW SEQUENCE LISTING              DATE: 11/22/2000
        PATENT APPLICATION: US/09/545,072  TIME: 11:38:08

        Input Set : A:\seqlist.txt
        Output Set: N:\CRF3\11222000\I545072.raw
```

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DEC 05 2000

TECH CENTER 1600/2900

```
     4 <110> APPLICANT: Yu Lin
     5       Lin Sun
     6       Long V. Nguyen
     7       Howard M. Goodman
     9 <120> TITLE OF INVENTION: MODIFICATION OF PLANT STORAGE RESERVES
    12 <130> FILE REFERENCE: 00786/368002
C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/545,072
C--> 14 <141> CURRENT FILING DATE: 2000-04-07
    14 <150> PRIOR APPLICATION NUMBER: 60/128,651
    15 <151> PRIOR FILING DATE: 1999-04-08
    17 <160> NUMBER OF SEQ ID NOS: 9
    19 <170> SOFTWARE: FastSEQ for Windows Version 4.0
    21 <210> SEQ ID NO: 1
    22 <211> LENGTH: 1483
    23 <212> TYPE: DNA
    24 <213> ORGANISM: Arabidopsis thaliana
    26 <400> SEQUENCE: 1
    27 attgcaacca ggaagagaaa gaaaatcaga gattgattta acgtgaatgg aattttgttg      60
    28 tttcccaaat tcttctgaga aatagcaaag ttcagttttg tttctctcta tctgaagctc     120
    29 aatggaagct tataagcaat gggtttggag aaatagagag tatgtacaat cctttggatc     180
    30 ctttgccaac ggattgacat ggctgcttcc tgagaagttt tctgcttcag agattggacc     240
    31 agaagcagta acggcttttt tgggcatatt cacaacgata aatgaacaca taattgaaaa     300
    32 tgctccaaca cctcgtggcc atgttggatc ttccgggaat gatccatccc tttcttatcc     360
    33 actactcatc gccatcctca aggatttgga aactgttgtg gaagtggcag ctgaacactt     420
    34 ctatggagac aaaaaatgga actacattat tctcactgaa gctatgaaggg ctgtcattag     480
    35 gttagccttg ttccggaata gtgggtataa gatgcttctt caaggagggg aaacacctaa     540
    36 tgaggagaaa gattctaacc aatccgagtc gcaaaataga gctggtaatt cgggtagaaa     600
    37 tctcgggcct catggtcttg gaaaccaaaa tcatcataat ccatggaact tggaaggacg     660
    38 ggcgatgtct gctttaagtt catttggtca gaatgcaaga acaacaacat cttctacccc     720
    39 cggttggtct cgaagaattc aacatcagca agcagttata gagcctccaa tgatcaagga     780
    40 gaggcgaaga acgatgtccg agctacttac tgagaagggt gttaatggag cgttgtttgc     840
    41 gattggtgag gttctttaca taacgagacc gctcatttac gttcttttca tcagaaaata     900
    42 tggagtccga tcttggattc cttgggctat atcgctttct gtggacacac tggggatggg     960
    43 tcttcttgca aattcgaagt ggtgggqaga gaagagcaag caagtccatt tctcaggacc    1020
    44 tgaaaaggat gagctgagga gacgaaaact gatatgggca ttgtacctca tgagagatcc    1080
    45 attcttcacc aagtacacaa ggcagaagct ggaaagctct caaaagaagc tggaactaat    1140
    46 tccattgatc ggattcctca cagagaagat tgtggagctt ttggagggag ctcagtcacg    1200
    47 gtacacttac atatcgggat cgtgaggtta agcgttttac ttatggttta tatgcaacgg    1260
    48 aagaatattg ccattgttgg aatgcttttt tagatcatca aaggctccta cagatttctt    1320
    49 agggaatggt ttcaggcttt tgttagaaat tgtgtttatt gcaacaggta gagaacataa    1380
    50 ccatagacag atgtatctga agagataagc ttctctatgt ctaaagaaat ggaccgatac    1440
    51 gaataaaaca agcatcatta aagattaaaa aaaaaaaaaa aaa                       1483
    53 <210> SEQ ID NO: 2
    54 <211> LENGTH: 367
    55 <212> TYPE: PRT
    56 <213> ORGANISM: Arabidopsis thaliana
    58 <400> SEQUENCE: 2
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/545,072

DATE: 11/22/2000
TIME: 11:38:08

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\11222000\I545072.raw

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59 Met Glu Ala Tyr Lys Gln Trp Val Trp Arg Asn Arg Glu Tyr Val Gln
60  1               5                   10                  15
61 Ser Phe Gly Ser Phe Ala Asn Gly Leu Thr Trp Leu Leu Pro Glu Lys
62              20                  25                  30
63 Phe Ser Ala Ser Glu Ile Gly Pro Glu Ala Val Thr Ala Phe Leu Gly
64          35                  40                  45
65 Ile Phe Thr Thr Ile Asn Glu His Ile Ile Glu Asn Ala Pro Thr Pro
66      50                  55                  60
67 Arg Gly His Val Gly Ser Ser Gly Asn Asp Pro Ser Leu Ser Tyr Pro
68 65                  70                  75                  80
69 Leu Leu Ile Ala Ile Leu Lys Asp Leu Glu Thr Val Val Glu Val Ala
70                  85                  90                  95
71 Ala Glu His Phe Tyr Gly Asp Lys Lys Trp Asn Tyr Ile Ile Leu Thr
72              100                 105                 110
73 Glu Ala Met Lys Ala Val Ile Arg Leu Ala Leu Phe Arg Asn Ser Gly
74          115                 120                 125
75 Tyr Lys Met Leu Leu Gln Gly Gly Glu Thr Pro Asn Glu Glu Lys Asp
76      130                 135                 140
77 Ser Asn Gln Ser Glu Ser Gln Asn Arg Ala Gly Asn Ser Gly Arg Asn
78 145                 150                 155                 160
79 Leu Gly Pro His Gly Leu Gly Asn Gln Asn His His Asn Pro Trp Asn
80                  165                 170                 175
81 Leu Glu Gly Arg Ala Met Ser Ala Leu Ser Ser Phe Gly Gln Asn Ala
82              180                 185                 190
83 Arg Thr Thr Thr Ser Ser Thr Pro Gly Trp Ser Arg Arg Ile Gln His
84          195                 200                 205
85 Gln Gln Ala Val Ile Glu Pro Pro Met Ile Lys Glu Arg Arg Arg Thr
86      210                 215                 220
87 Met Ser Glu Leu Leu Thr Glu Lys Gly Val Asn Gly Ala Leu Phe Ala
88 225                 230                 235                 240
89 Ile Gly Glu Val Leu Tyr Ile Thr Arg Pro Leu Ile Tyr Val Leu Phe
90                  245                 250                 255
91 Ile Arg Lys Tyr Gly Val Arg Ser Trp Ile Pro Trp Ala Ile Ser Leu
92              260                 265                 270
93 Ser Val Asp Thr Leu Gly Met Gly Leu Leu Ala Asn Ser Lys Trp Trp
94          275                 280                 285
95 Gly Glu Lys Ser Lys Gln Val His Phe Ser Gly Pro Glu Lys Asp Glu
96      290                 295                 300
97 Leu Arg Arg Arg Lys Leu Ile Trp Ala Leu Tyr Leu Met Arg Asp Pro
98 305                 310                 315                 320
99 Phe Phe Thr Lys Tyr Thr Arg Gln Lys Leu Glu Ser Ser Gln Lys Lys
100                 325                 330                 335
101 Leu Glu Leu Ile Pro Leu Ile Gly Phe Leu Thr Glu Lys Ile Val Glu
102              340                 345                 350
103 Leu Leu Glu Gly Ala Gln Ser Arg Tyr Thr Tyr Ile Ser Gly Ser
104          355                 360                 365
106 <210> SEQ ID NO: 3
107 <211> LENGTH: 21
108 <212> TYPE: DNA
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/545,072

DATE: 11/22/2000
TIME: 11:38:08

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\11222000\I545072.raw

```
109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Primer
114 <400> SEQUENCE: 3
115 atcagagatt gatttaacgt a                                21
117 <210> SEQ ID NO: 4
118 <211> LENGTH: 21
119 <212> TYPE: DNA
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: Primer
125 <400> SEQUENCE: 4
126 acgattttca attatgtgtt c                                21
128 <210> SEQ ID NO: 5
129 <211> LENGTH: 19
130 <212> TYPE: DNA
131 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: Primer
136 <400> SEQUENCE: 5
137 cgcttggtcg gtcatttcg                                   19
139 <210> SEQ ID NO: 6
140 <211> LENGTH: 391
141 <212> TYPE: PRT
142 <213> ORGANISM: Yarrowia lipolytica
144 <400> SEQUENCE: 6
145 Met Thr Asp Lys Leu Val Lys Val Met Gln Lys Lys Lys Ser Ala Pro
146  1               5                  10                  15
147 Gln Thr Trp Leu Asp Ser Tyr Asp Lys Phe Leu Val Arg Asn Ala Ala
148                 20                  25                  30
149 Ser Ile Gly Ser Ile Glu Ser Thr Leu Arg Thr Val Ser Tyr Val Leu
150             35                  40                  45
151 Pro Gly Arg Phe Asn Asp Val Glu Ile Ala Thr Glu Thr Leu Tyr Ala
152         50                  55                  60
153 Val Leu Asn Val Leu Gly Leu Tyr His Asp Thr Ile Ile Ala Arg Ala
154 65                  70                  75                  80
155 Val Ala Ala Ser Pro Asn Ala Ala Ala Val Tyr Arg Pro Ser Pro His
156                 85                  90                  95
157 Asn Arg Tyr Thr Asp Trp Phe Ile Lys Asn Arg Lys Gly Tyr Lys Tyr
158                 100                 105                 110
159 Ala Ser Arg Ala Val Thr Phe Val Lys Phe Gly Glu Leu Val Ala Glu
160             115                 120                 125
161 Met Val Ala Lys Lys Asn Gly Gly Glu Met Ala Arg Trp Lys Cys Ile
162         130                 135                 140
163 Ile Gly Ile Glu Gly Ile Lys Ala Gly Leu Arg Ile Tyr Met Leu Gly
164 145                 150                 155                 160
165 Ser Thr Leu Tyr Gln Pro Leu Cys Thr Thr Pro Tyr Pro Asp Arg Glu
166                 165                 170                 175
167 Val Thr Gly Glu Leu Leu Glu Thr Ile Cys Arg Asp Glu Gly Glu Leu
```

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\11222000\I545072.raw

```
168              180              185              190
169 Asp Ile Glu Lys Gly Leu Met Asp Pro Gln Trp Lys Met Pro Arg Thr
170           195              200              205
171 Gly Arg Thr Ile Pro Glu Ile Ala Pro Thr Asn Val Glu Gly Tyr Leu
172     210              215              220
173 Leu Thr Lys Val Leu Arg Ser Glu Asp Val Asp Arg Pro Tyr Asn Leu
174 225              230              235              240
175 Leu Ser Arg Leu Asp Asn Trp Gly Val Val Ala Glu Leu Leu Ser Ile
176           245              250              255
177 Leu Arg Pro Leu Ile Tyr Ala Cys Leu Leu Phe Arg Gln His Val Asn
178           260              265              270
179 Lys Thr Val Pro Ala Ser Thr Lys Ser Lys Phe Pro Phe Leu Asn Ser
180     275              280              285
181 Pro Trp Ala Pro Trp Ile Ile Gly Leu Val Ile Glu Ala Leu Ser Arg
182     290              295              300
183 Lys Met Met Gly Ser Trp Leu Leu Arg Gln Arg Gln Ser Gly Lys Thr
184 305              310              315              320
185 Pro Thr Ala Leu Asp Gln Met Glu Val Lys Gly Arg Thr Asn Leu Leu
186           325              330              335
187 Gly Trp Trp Leu Phe Arg Gly Glu Phe Tyr Gln Ala Tyr Thr Arg Pro
188           340              345              350
189 Leu Leu Tyr Ser Ile Val Ala Arg Leu Glu Lys Ile Pro Gly Leu Gly
190           355              360              365
191 Leu Phe Gly Ala Leu Ile Ser Asp Tyr Leu Tyr Leu Phe Asp Arg Tyr
192     370              375              380
193 Tyr Phe Thr Ala Ser Thr Leu
194 385              390
196 <210> SEQ ID NO: 7
197 <211> LENGTH: 19
198 <212> TYPE: DNA
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: Primer
204 <400> SEQUENCE: 7
205 ggcaatattc ttccgttgc                                    19
207 <210> SEQ ID NO: 8
208 <211> LENGTH: 23
209 <212> TYPE: DNA
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: Primer
215 <400> SEQUENCE: 8
216 aaaaatggaa ctacattatt ctc                               23
218 <210> SEQ ID NO: 9
219 <211> LENGTH: 22
220 <212> TYPE: DNA
221 <213> ORGANISM: Artificial Sequence
223 <220> FEATURE:
224 <223> OTHER INFORMATION: Primer
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RAW SEQUENCE LISTING   DATE: 11/22/2000
PATENT APPLICATION: US/09/545,072   TIME: 11:38:08

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\11222000\I545072.raw

```
226 <221> NAME/KEY: variation
227 <222> LOCATION: (1)...(22)
228 <223> OTHER INFORMATION: Where h is a, c, or t/u; not g.
230 <400> SEQUENCE: 9
231 ataagtaaaa cgcttaacct hc                           22
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VERIFICATION SUMMARY   DATE: 11/22/2000
PATENT APPLICATION: US/09/545,072   TIME: 11:38:09

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\11222000\I545072.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date